A Science Magazine from CTW, the Creators of Sesame Street.

April 1985

Searching for the Loch Ness Monster



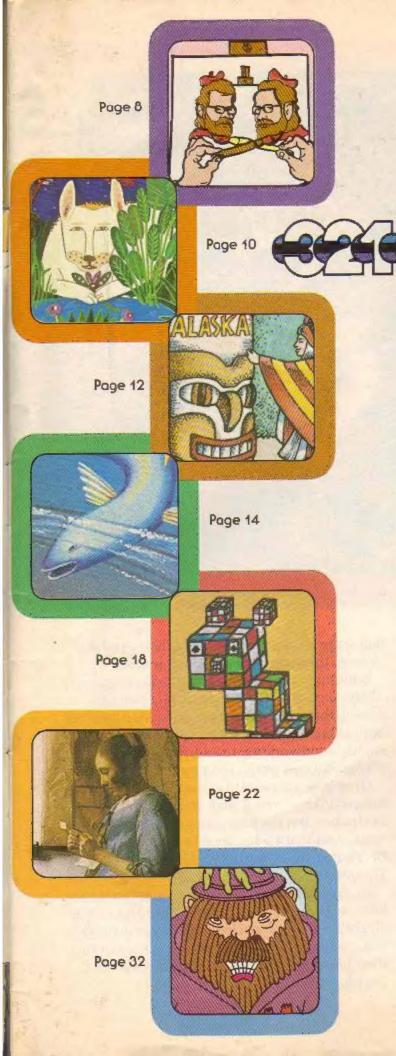
Non-Cents!

Sometimes you see things every day—but don't really notice them. For instance, did you ever notice the back side of a penny? Take these pennies. Only one of them resembles the coins you may have jingling in your pocket. The others are all fakes. Take a close look. Can you figure out which of these cents makes real sense? When you think you know the cent from the non-cents turn to page 35.

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Featuring This Month

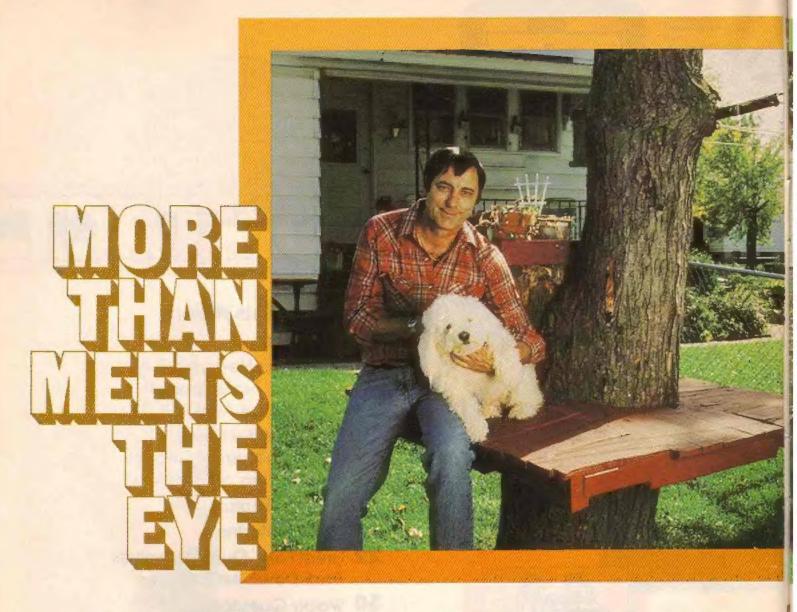
- 2 Non-Cents
- 4 More Than Meets the Eye: Long-Lost Twins Discover They're A Lot Alike
- 14 The Search for Nessie: Is There a Mystery Creature in the Waters of Loch Ness?
- **18** Creature Feature
- 20 Monster Madness
- 22 Great Fake-Outs: Detectives
 Track Down Art Forgeries
- **30** Wacky Questions

Plus Our Regular Departments

- List of the Month: Seeing Double
- **10** Coming Attractions
- 12 Factoids
- 26 The Bloodhound Gang: The Case of the Stolen Statue
- 29 Mail
- 32 Extra!
- 35 Did It!
- **36** Contact Lens

Front Cover: Is there a Loch Ness Monster? So far, no one has been able to find one!

Cover Illustration © Lulu Delacre



'Wouldn't it be neat if somewhere in the world there's another person who looks exactly like you? Just think how amazing it would be to meet your double. You might find that you both laugh in exactly the same way. Or that you both wiggle your left little toe when you hear Michael Jackson sing. You might even have the same number of cavities in the same teeth.

Is this really possible? Well, amazing similarities have been found by some people. These folks are identical twins who were separated at birth—and grew up in different families. When the twins finally meet, they often discover that they are amazingly alike.

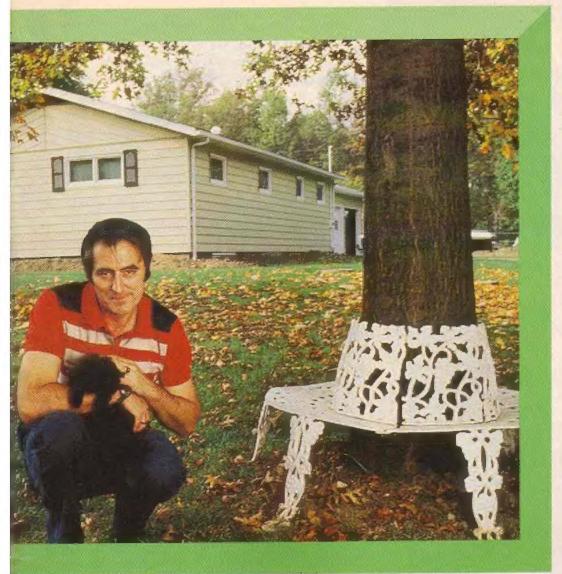
Jim, Meet Jim

Take the case of the famous "Jim twins." Jim Springer and Jim Lewis are identical twins who were adopted by two different families. Neither twin knew about the other for a long time. When they were 39, they found each other—and discovered they were alike in many ways.

Both Jims cross their legs in the same way. Their voices are impossible to tell apart. In school, they both liked math and hated spelling. Both of the twins bite their nails. And each Jim enjoys woodworking. In addition, both Jims are six feet tall and weigh 180 pounds.

Of course, you would expect identical twins to look alike—even if they do grow up in different homes. But the Jims also act alike in many ways. And that's what amazes scientists like Dr. Thomas Bouchard of the University of Minnesota.

Dr. Bouchard started studying identical twins because he wanted to find out more about how all children develop. He wanted to know which is more important: The genes people get from their parents or the surroundings in which people grow up.



by Joan Graf

Naturally, the "Jim twins" look alike since they're identical. But they also act alike in many ways. Even their dogs have the same name—Toy.

PHOTOS MAGNUM & MICHAEL NICHOLS

For example, why is one kid a good basketball player, while another plays the trumpet well? Why are some people good at math while others are skilled at drawing? Is it because some people are born with a talent for sports or numbers? Or is it because they grew up in a place where they learned to do and like certain things?

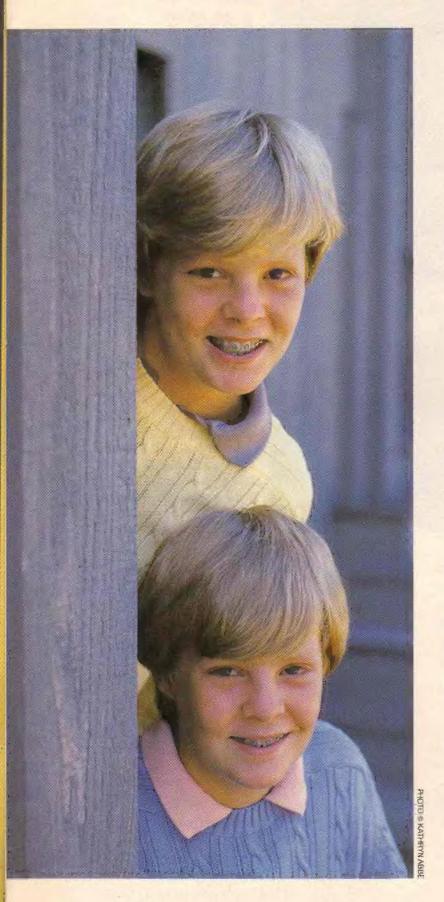
Researchers already know that some things are controlled by genes—a person's hair color, eye color, the shape of the nose. Genes are the basic directions for how to "grow" a person. They're what everyone inherits from his or her parents. But each person usually gets a set of genes that are different from all other sets in the world. Only identical twins inherit exactly the same sets of genes.

Dr. Bouchard wanted to learn just what else genes may influence besides a person's size and shape. And what better way to find out than by studying identical twins who grew up separately?

The "Jim twins" first came to Dr. Bouchard's attention in a newspaper story. Then he invited them to visit his lab. There, they were examined by doctors, took a lot of different tests, and were asked more than 1,500 questions. When it was over, Dr. Bouchard said, "The twins have a great deal of similarities in almost everything we looked at!"

Both Jims worked part time as deputy sheriffs. Both had dogs named Toy, and wives named Betty. Each had a son named James Allan or James Alan.

Are these just coincidences? Or does it have something to do with a person's genes? Dr. Bouchard and his team of researchers don't yet know for sure. But it does seem certain that identical genes can encourage identical twins to be alike in their behavior and in many other ways—besides looks.



The Search Goes On

Other strange similarities have turned up in different sets of twins. For example, Dorothy and Bridget are identical twins who met each other for the first time in Dr. Bouchard's lab. When they met, each was wearing seven rings on her fingers!

Then there are twin brothers, Oskar and Jack. Though they grew up in different countries, both think it's funny to sneeze in a crowd of strangers. Each twin also reads magazines from back to front. Both of them keep rubber bands on their wrists.

Other researchers who study identical twins report some of the same patterns. Take Herta and Berta, for example. These twin girls grew up speaking different languages. They even lived on separate continents. Yet both purr like cats when they are feeling content or happy.

When twins Madeline and Lilian met for the first time, they found that each was a singer. But most surprising of all, both Madeline and Lilian had the habit of rubbing their noses and rocking back and forth when they were tired.

Identical twins who are separated at birth and who grow up in different families are pretty rare. So researchers haven't found enough pairs to study yet. Until they do, they cannot say for sure which influences a person's behavior more: genes or surroundings.

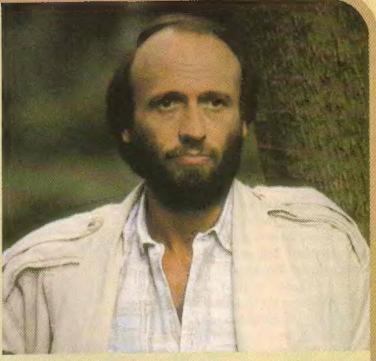
Right now, Dr. Bouchard and other scientists are busy tracking down as many long-lost identical twins as they can find. Sometimes people who are searching for their own long-lost twin contact the Minnesota researchers. Once in a while, the scientists actually find the missing twin. And occasionally the twins meet for the first time in Dr. Bouchard's lab.

"Many of them don't feel like they're meeting strangers," Dr. Bouchard says. "They feel as though they've known each other all their lives."

Left: These twins are growing up together in the same family. They share the same genes from their parents and the same surroundings. But twins who grow up in different families share only the same genes.

Maurice Gibb (right) and his twin Robin (below) are members of the Bee Gees, a rock group. They are not identical. They don't look any more alike than any other brothers.





Alght: Tim and Tom Gullikson are another set of famous twins who work together. They are professional tennis players who play doubles. Tim and Tom are identical twins.

Two Kinds of Twins

Not all twins are identical like the ones Dr. Bouchard studies. The most common kind of twins are called fraternal twins. They are no more alike than other pairs of sisters or brothers.

All human babies, twins and non-twins alike, start out as a single, tiny fertilized egg in the mother's body. The egg contains a set of genes which will "design" the baby.

But once in a while, an egg separates into two identical parts. Each one has an identical set of genes. The two separate parts of the egg will grow into identical look-alike twin girls or look-



alike twin boys.

On the other hand, fraternal twins start out as two different eggs. Each egg has its own set of different genes. Fraternal twins can be two boys, two girls, or one of each. And they are no more alike than any brother or sister. They just happen to be born at the same time.

For example, Maurice and Robin Gibb are fraternal twins who are members of the Bee Gees. They do look like they're related. But no one would ever have a hard time telling them apart!

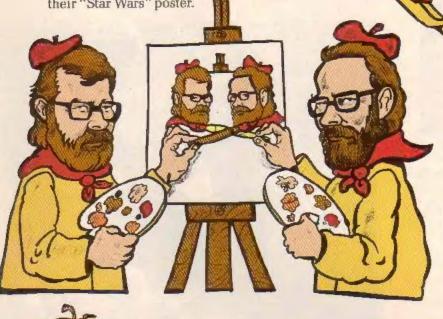
List of the Month

by Joanna Foley

One Paints, the Other
Sleeps Ever wish you could wake up and find someone else finishing your homework? Tim and Greg Hildebrandt do that a lot. They're artists who always work together. Greg may go to sleep while Tim paints or vice-versa. The sleeping twin wakes up to find the painting nearly finished. Look for the Hildebrandt name the next time you see their "Star Wars" poster.

Gold and Silver During the Winter Olympics on TV, you probably saw the top U.S. ski racer, Phil Mahre. Or was it his twin, Steve? They not only look alike, but ski alike, too. In fact, they finished first and second in one race. After winning their gold and silver medals, the Mahre twins retired from racing

at the age of 26.



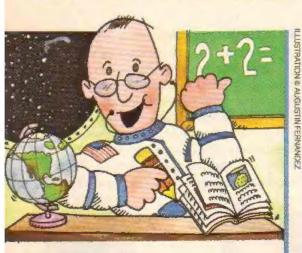
Two Cheers Marilyn and Rosalyn Borden got into show business by singing, dancing, and doing comedy. But their latest funny act is cheerleading for a football team called the Globe Gallopers. These twins don't just cheer the players on. They do everything from running touchdowns to carrying the stretcher out to the field to help an injured player. Yea, team!

Seeing Double For each of these pairs of identical twins, their fame is the same. If you ever see them, you'll think you're seeing double. But relax. It's not your eyes. It's just double trouble!

For each of these pairs of identical twins, their fame is the



Coming-Attitoctions



Teachers in Space

Is there a teacher whom you would like to send into space? If so, this may be your opportunity. NASA—the U.S. space agency—is looking for a school teacher to ride aboard the shuttle. The agency thinks a teacher will be able to tell about his or her shuttle experiences to boys and girls back on earth.

If you've got a teacher you'd like to send into space, write and tell us who and why. We'll print some of your answers. And we'll send the whole batch on to NASA. But we can't promise that your teacher will be chosen to take that trip into space!

Yesterday's Tomorrows

Back in the 1940's and '50's—when your parents were kids—Americans were busy making models of what they thought the future would be like. Now, more than 300 of these models, books, magazine covers, toys, and photos can be seen in a museum show that is going across the U.S.

Visitors will get to see an incredible collection of objects.
One favorite is a model of a Ford which was to run on nuclear energy (see photo). Other objects on display include futuristic trains, strange-looking aircraft, fantastic houses, and out-of-this-world cities. Visitors will also view ideas for spacesuits, ray guns, rockets, and robots.

Here's the show's traveling schedule: Now through April 14: Eugene, Oregon; May 11—July 21: Los Angeles, California; August 17—October 27: Oakland, California; November 23—February 2, 1986: Boston, Massachusetts; June 7—August 17, 1986: Stamford, Connecticut. Check your local paper for where you can visit the exhibit.

This is one engineer's idea of what a car that runs on nuclear power would look like!



Invention of the Month

If your dog has fleas, some sound help is coming your pet's way. Now there's an electronic flea and tick collar. It uses bursts of sound that humans and pets can't hear to make fleas flee. Even though humans can't hear the sound, it is apparently unbearable to fleas. The unit comes with a speaker and battery and attaches to a nylon collar.



The Hole Story

The deepest hole in the world is getting deeper. The Soviet Union is looking for oil and natural gas far below earth's surface. Now the hole is more than eight miles deep. The Soviets expect it to reach 49,215 feet before they are finished digging.

So far the Soviets haven't come upon any oil, but they have learned something. When the Soviets reached a depth of two miles, they discovered that temperatures started to go up at a regular rate. The temperatures increase by 4.5°F. every 300 feet.

The Soviets figure that the temperature of the hole should reach 572°F, when the drilling is finished.

Shoot Em Up

If you've had chickenpox, you know how crazy-making all that scratching, scaling, and scabby skin can be. If you haven't had chickenpox, take heart. You may not ever get it, thanks to a vaccine that may be ready soon.

So far doctors who are testing the vaccine say it is effective in fighting off the disease. The vaccine will be added to a shot that already protects against measles, mumps, and German measles.

Story suggested by Veronica Ruffel, El Paso, TX.

Fish and Chips

Each year, salmon migrate up the Columbia River in Washington. But now the fish are disappearing before finishing the trip. Scientists want to know why, so they can help the salmon complete their trip in the future.

Researchers are putting a computer chip inside many of the fish. The chip is the size of a few grains of rice. Each chip is coded with a signal so scientists can keep track of where the fish disappear.

Then the scientists will go to that spot and see if they can figure out what the problem is.



PHOTO ANIMALS, ANIMALS, & STOUFFER PRODUCTIONS ... TO.



Watt's Up in San Diego?

Actually, it should be watt's down in San Diego, CA! It seems that the glow from San Diego's street lamps have been getting in the way of astronomers who study the heavens at the Palomar Observatory.

So now San Diego has agreed to change its street lamps so astronomers can continue their work. The new lamps will give off a kind of light that won't get in the astronomers' way. The lights are also cheaper to run. The only problem: the new lights give people a real strange look. "Some people complain that they look like dead bodies," admits one San Diego official.

But that's okay with the astronomers. In fact, they are hoping that other cities near Palomar will also change to lower power lights. That would make studying the stars and planets even better for the scientists.

New Animals to Be Discovered?

There are new species of animals waiting to be discovered, says Bernard Heuvelmans, a zoologist. According to Dr. Heuvelmans, more than 1,200,000 species have been identified since 1758. That was when a scientist first started to write down all the different classes of animals.

Dr. Heuvelmans says that there are anywhere from 4 million to 30 million species of animals and insects waiting to be discovered under the sea, in forests, jungles, and everywhere

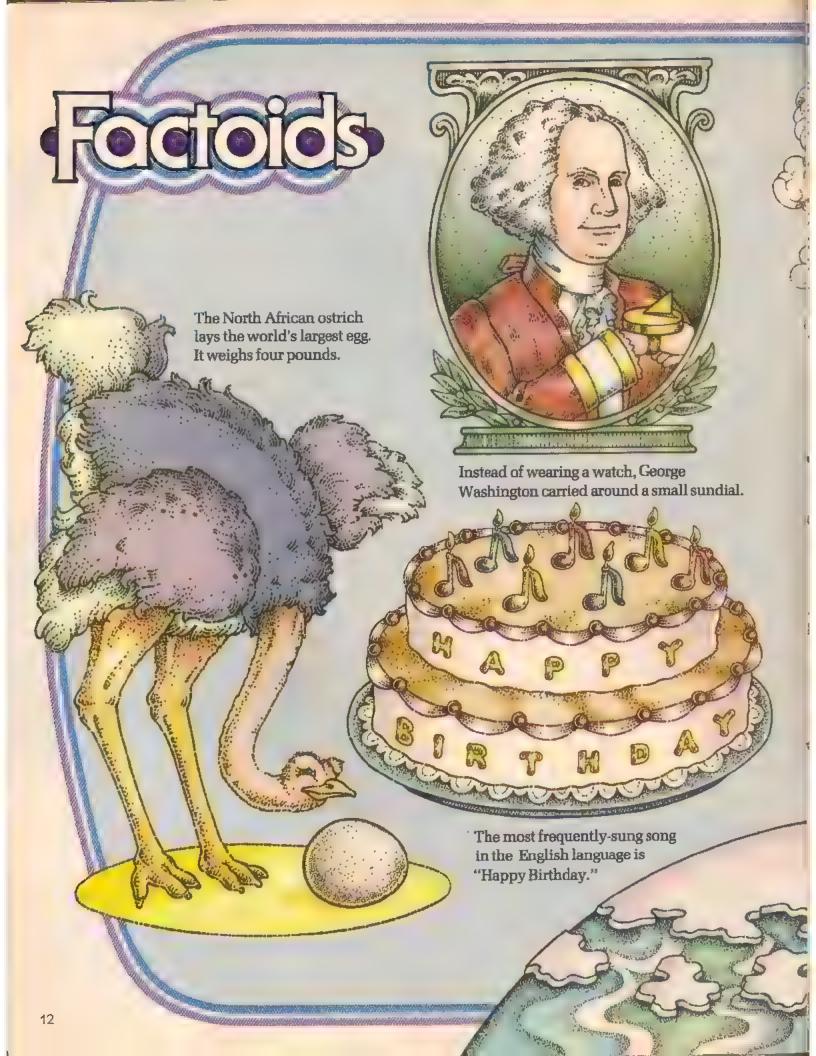
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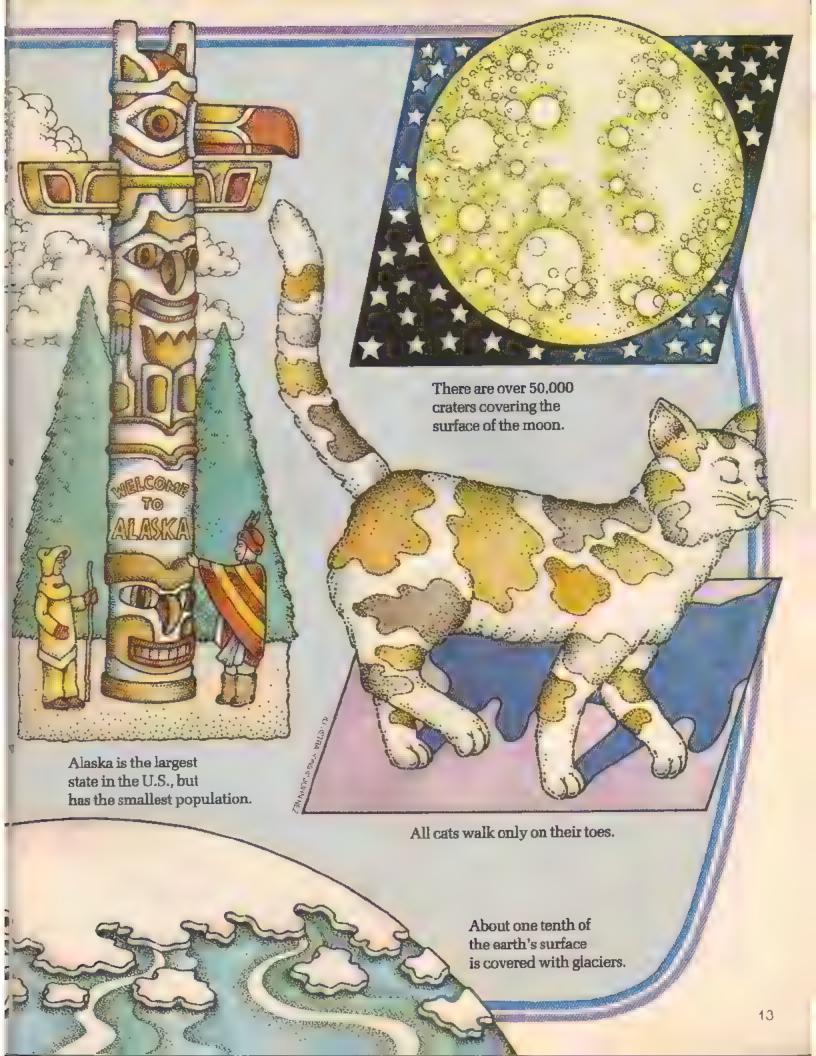


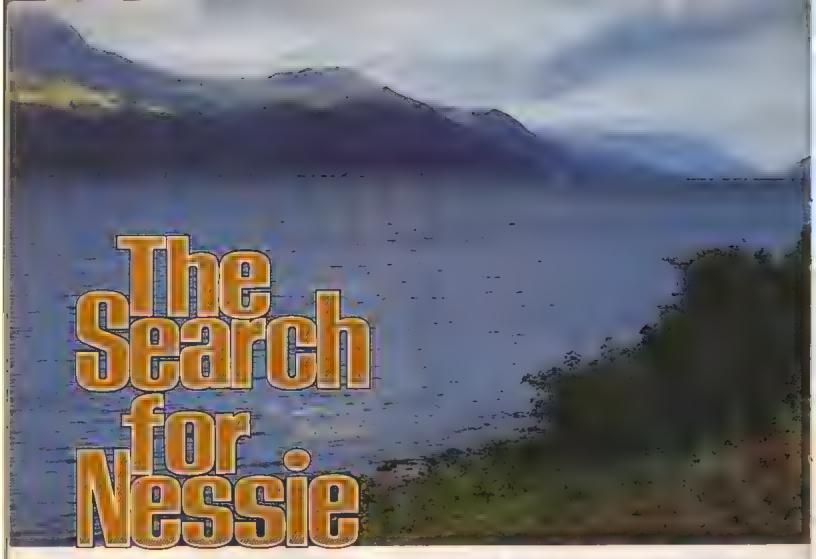
So What's New?

You tell us and you'll get a nifty CONTACT T-shirt—if we print your story. Send us any science stories that have to do with the future (which could even be next week!). Send stories to:

Coming Attractions P.O. Box 599 Ridgewood, NJ 07657







IS THERE A MYSTERY CREATURE IN LOCH NESS?

The famous Loch Ness Monster may well be one of the world's greatest mysteries. Thousands of people have reported seeing a part of it. But no one has ever seen all of it. Whatever it may be, many people believe the sea creature is alive and well and living in the murky waters of Loch Ness in Scotland.

These waters are a dark and mysterious place. For hundreds of years, people living around the loch (Scottish for lake) say they have seen a huge sea creature there. But almost none of the descriptions of the beast are ever the same.

Stories of Nessie go all the way back to the year 565. A man named Columba first reported seeing it. He saw a man swimming across the loch. The man came face to face with a "very odd-looking beastie, something like a huge frog." This was the first of many sea serpent sightings to come.

Modern Monster Spotters

It wasn't until 1934 that a modern "monster

spotter" managed to get a photo of Nessie. Dr. R.K. Wilson was driving around the loch when he saw something moving in the water. He grabbed his camera and a lens that brings faraway objects into closer view. Click!

The blurry photograph seemed to show an animal with a long neck, a snake-like head, and a huge, barrel-shaped body. The photo didn't prove that Nessie existed. But it did get several scientists interested in finding out just what was going on in Loch Ness.

One believes it is a picture of an otter in the act of diving. Another thinks it is a seal. Dr. Roy Mackal, a scientist who searches out sea creatures, thinks it's a diving bird.

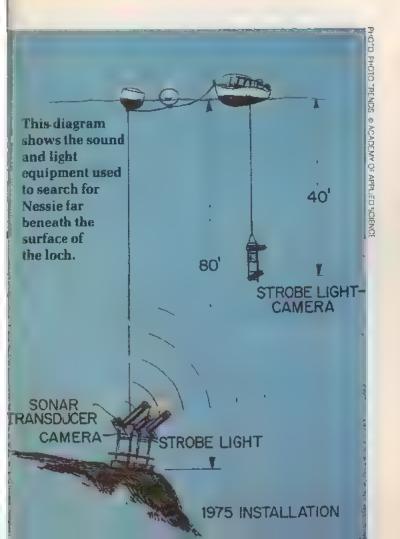
If Nessie exists, Dr. Mackal thinks that it might be a relative of the plesiosaur (PLEE-see-a-sore), a kind of dinosaur that lived in the sea long ago. The plesiosaurs were about 50 feet long with small heads, long necks, flippers and humps. No one knows for sure if the fish-eating plesiosaurs died out with the other dinosaurs

Left: For over 1,400 years, people have reported seeing a creature in the dark and murky waters of Loch Ness. So far, however, "Nessie" hasn't been found.





Above: A research team took this photo at the loch and used a computer to make it clearer. It seems to show an animal with a flipper.



about 60 million years ago. But most scientists believe they did.

Plesiosaurs had to swim close to the water's surface to breathe air. If Nessie exists, however, it hardly ever surfaces. Most scientists think that plesiosaurs could not live in water as cold as that of Loch Ness, anyway. Besides, how could a few plesiosaurs have survived while all the rest of the dinosaurs died off?

Science Joins the Search

The sea serpent's next "big show" was photographed underwater. In 1972, Robert Rines and a crew from the Boston Academy of Applied Science set up lights, cameras, and sonar equipment on two boats in Loch Ness. Sonar is a machine that uses sound waves to locate objects underwater.

The sonar was supposed to detect any large creature or movement. It would then trigger the lights to turn on. Then cameras would start taking pictures.

But the pictures that the Nessie search party took were far from perfect. They show what seems to be a large flipper or fin. But like other photos of Nessie, these are a blur.



In fact, Rines's photos are so blurry many scientists still weren't convinced that Nessie was there. So Rines got an engineer to use a computer to make the photo clearer.

Later, two engineers named Alan Kielar and Rikki Razdan looked at the photos before and after the computer touched them up. They decided that the images didn't look all that

much like flippers.

So in 1983, Kielar and Razdan flew to Scotland to search for Nessie themselves. They set up 144 sonar devices and nine underwater dart guns. The guns were designed to take a small sample of skin from an animal. The sample could be studied later. Any object more than 10 feet long swimming near the sonar would set off an alarm. Then the dart guns would fire.

What happened? After six straight weeks, there was no sign of Nessie. So Kielar and Razdan gave up their search. Now these engineers think other sightings of Nessie might have been just air bubbles, floating leaves, branches or schools of fish.

Other Answers

So if there isn't a monster in the waters of Loch Ness, what are people seeing there? Some scientists think it may be a giant seal. Seals are known to dive as deep as the creature in the reports. But seals have their babies on the shore. If the creature is a seal, why haven't there been more land sightings?

Other scientists think Nessie may be a large school of fish, such as salmon or eels, that look

like a monster from a distance.

But maybe what people see in the loch is not an animal at all. Maybe it is an optical illusion playing tricks on the eyes. Whenever a boat passes through this narrow loch, it makes unusual waves. After the usual V-shaped waves spread out behind the boat, they reach the shores and "bounce" back to the center. These waves meet where they started, creating a standing wave. It looks just like a half-submerged creature swimming in a straight line. People don't realize what they're seeing is only a wave.

Mirages (muh-RAZH-es) are another kind of optical illusion that people often see at Loch Ness. Different layers of air above the loch sometimes have different temperatures. These layers bend the light waves that reflect off objects on the loch or near it. The result can be that a ship sailing on the loch may appear to be



This world-famous photo shows a blurry figure breaking the surface of Loch Ness. It could be a sea creature or an optical illusion.

raised high above the surface. It could be that some sightings of Nessie were nothing more than mirages.

"After hearing so many stories about Nessie, people expect to see something on the loch—just like with UFOs," Dr. Leonard Eisenberg told 3-2-1 CONTACT. He teaches a class called "Exploring the Unknown."

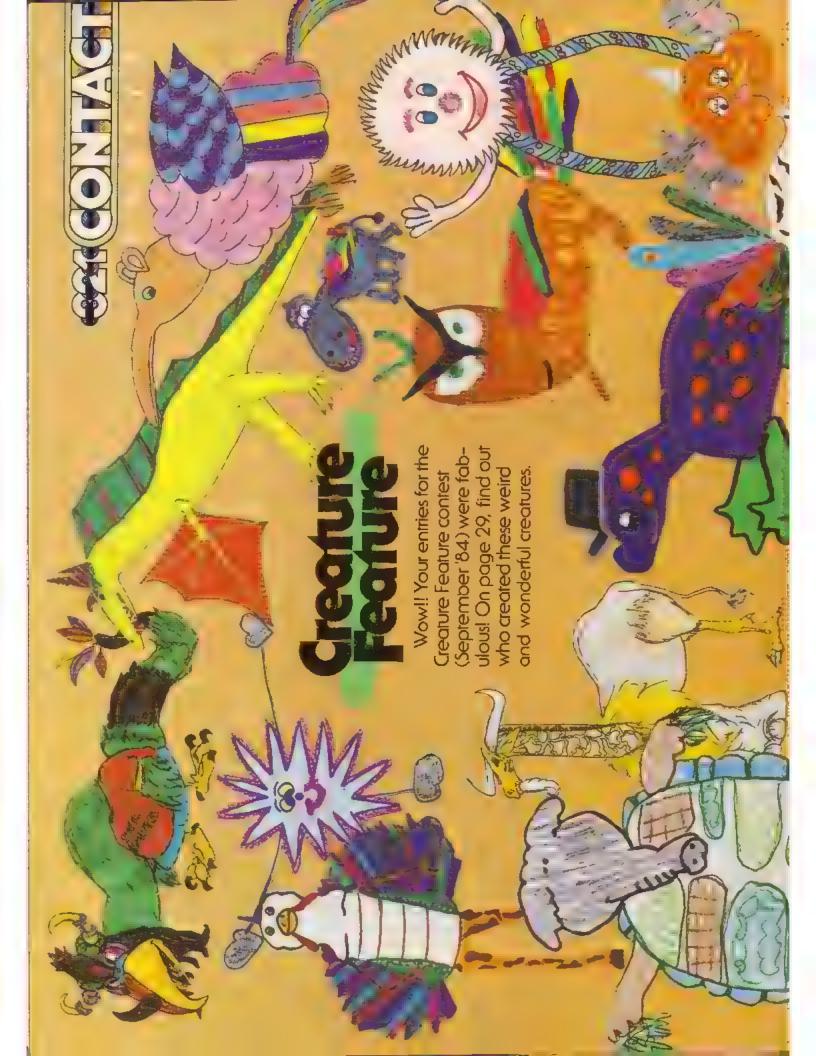
Dr. Eisenberg continued, "When you look at the evidence for Nessie, it can be interpreted in different ways. I've seen underwater photos from Loch Ness that show pictures of a giant whale-like creature. But it could be the photo of a guppy blown way up!

"We don't have any pieces of hard evidence, such as bones or a piece of flesh," he adds.

Dr. Roy Mackal, the biologist, agrees it is very unlikely that sea monsters exist. "But we've got to check out the long shots.

"Scientists need to have results that can be reproduced so you can show others," he says. "So the only solution is to come up with the body of an animal or catch one in a trap."

Until then, many scientists will continue to think that Nessie exists only in people's imaginations. What do you think? Now that you've read some of the facts, do you believe there is a strange creature in Loch Ness? Or are people seeing only what they want to see?







You are on the prowl for five creatures that have been hiding from human beings for years. But strange happenings will be blocking your path all the way.

Number of players: 2, 3, or 4

You'll need one of a pair of dice and markers (such as coins) for each player.

How to play the game

- 1. Players place their markers on one of the Starts. Each player must begin on a different Start.
- 2. Players throw die to see who goes first.
- **5.** Players travel in a straight line along the dotted path. Match the number you roll with the chart below. For example, if a player rolls a 3 you may travel South 1 space and West 2 spaces, or choose to travel East 4 spaces.

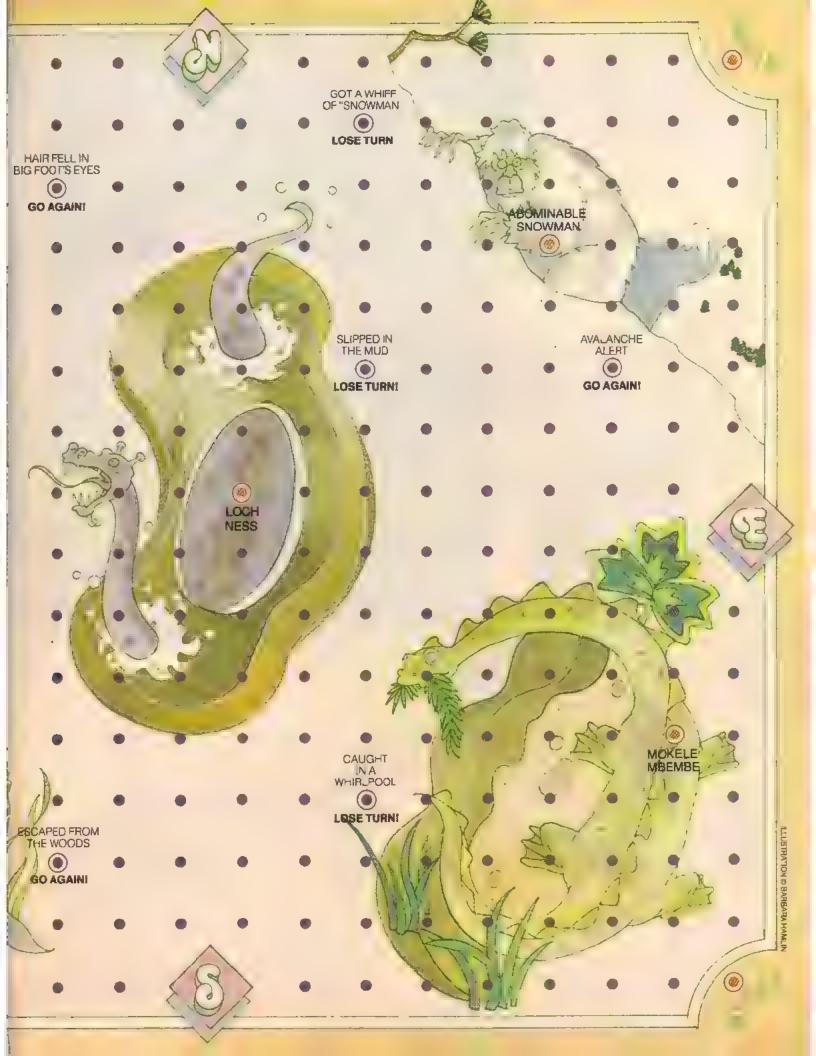
Your game strategy depends on which direction you choose to travel. It's up to you to figure out the fastest way to reach the monsters. If you're not sure of a certain direction, just check the compass.

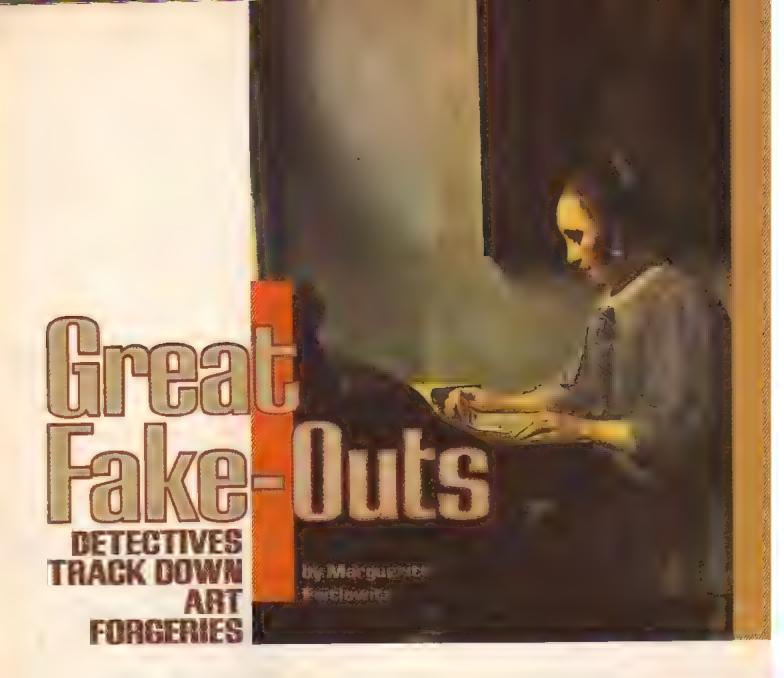
- 4. To capture a monster, you must land on the exact spot where the monster is hiding. Each monster can only be captured by one player. So at any time you may have to change your monster search strategy.
- 5. If you can't make one of the moves, then you must choose the other direction. If you can't make either of the moves, you lose a turn.
- 6. The player who finds the most monsters wins.

Direction Chart If you roll:

- 1—Travel North two spaces and West one space, or South three spaces.
- 2—Travel South three spaces and East one space, or North two spaces.
- 3—Travel South one space and West two spaces, or East four spaces.
- 4—Travel North three spaces and East two spaces, or West one space.
- 5—Travel North one space and West two spaces, or South two spaces.
- 6—Travel South one space and East two spaces, or North four spaces.







In the movie Raiders of the Lost Ark, Indiana Jones risked his life to remove a gold statue from a cave in the jungles of South America. Jones played a daring archeologist trying to get the statue for a museum display.

Of course, Raiders was nothing more than an adventure film. But in real life, museum workers, archeologists, and art experts often do risk their lives in search of art objects. They may trek to Indian ruins high in the Andes mountains. They may dive deep beneath the sea searching for shipwrecks containing valuable objects. They may explore ancient tombs of Egyptian princesses and rulers.

It sounds exciting. But even experts can be fooled. After searching high and low for objects, sometimes they are taken in by fakers, especially by forgers who take advantage of legends

about "lost" works of famous artists.

Take a man named Modigliani (mo-dee-lee-AHN-nee), for example. He was an Italian painter and sculptor. In the early 1900's, he tried to make sculptures. But they weren't coming out the way he wanted them to.

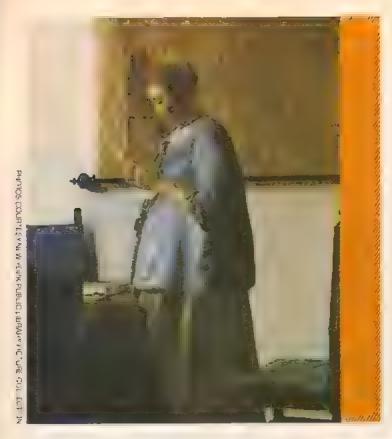
Finally, the artist showed some of his work to his friends. "What should I do?" he asked.

His friends said, "Throw them in the river." As the story goes, that's just what he did.

Ever since, art experts have hoped to find these "lost" sculptures. And last summer, three sculptures looking very much like Modigliani's were dug up from a river.

Fake Out!

Imagine the excitement among art experts and art lovers when they heard of the find. Not only



Which is the fake painting? The one on the left was painted by a forger. He hoped people would be fooled into thinking it was done by a famous artist who did the painting above.

were these long lost works by a famous artist, but they were found on the 100th anniversary of the artist's birth. Amazing!

Amazing...but for one thing. These sculptures weren't by Modigliani at all. Four college students said they had made one of the pieces.

Because art experts did not believe them, the students proved their case by going on TV. Using an electric drill, a chisel, and a screwdriver, they made a "Modigliani" head.

But what about the other two pieces that were also found? A few weeks later, that mystery was solved. A dockworker announced that he had made the other two sculptures. He even showed a videotape of himself doing it! The tape showed him "cooking" the sculptures so they would look like they had been underwater for 75 years.

Even if the forgers had not confessed, chances are excellent that the pieces would eventually have been found to be fakes. Thanks to developments in science and technology, it is becoming easier and easier to discover fakes.

Art experts, working with scientists as "art detectives," are tracking down forgers and fakers. Experts gather clues, follow up leads, and use machinery—such as electron microscopes—to prove objects are fakes.

Lest spring, for instance, New York City's Metropolitan Museum was getting ready to show its ancient Egyptian collection. Staff members were busy taking out a number of pieces including gold cups, vases, bowls, and jewelry. These objects came from the tomb of one of the relatives of King Tut. Tut was a ruler of Egypt some 3,300 years ago.

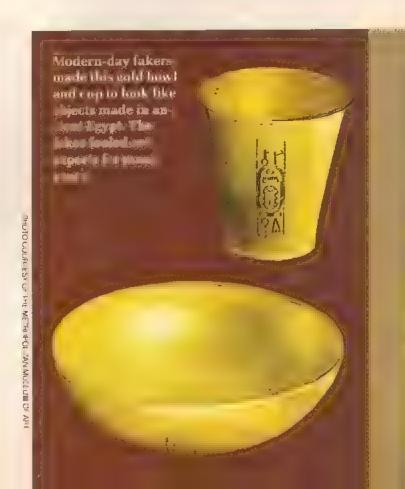
Imagine the workers' surprise when they first suspected that some objects—worth millions of dollars—might not be ancient at all!

Searching for Clues

"We were proud of these objects. We thought they were some of the best examples of Egyptian crafts around," Richard Stone told CONTACT. Mr. Stone is in charge of caring for much of the museum's old jewelry, gold, and pottery.

"These pieces had been written about in art books and in magazines. Yet the longer I looked at them, the more nervous I became that they were fake," Mr. Stone recalls.

Once Stone became suspicious, he set to work as an "art detective." First, he made a list of





Left: A group of college students wanted people to think this statue was carved by Modigliani.

Below: The joke lasted only a few days after the statue was pulled from the canal.



clues to help him crack his case.

For one thing, there seemed to be a seam—a raised ridge—along the surfaces of most of the objects that were supposedly made by the ancient Egyptians. Stone knew their gold objects never had a seam. As a matter of fact, seams weren't even invented until hundreds of years after the objects were supposedly made.

But this was just the beginning of the story.
There was more.

The solder (SOD-er)—the stuff that "glues" the feet to vases or handles to cups—appeared to be very sloppy. You could see where the pieces were attached. The Egyptians were neater than that, Stone knew. If the objects were genuine, they wouldn't be so sloppy.

Stone also realized that the writing and symbols on the objects appeared to have been cut into the surface. He knew that the ancient Egyptians never cut their designs. So something wasn't right.

So far, Stone had used his knowledge of ancient art work to gather his clues. Now he turned to science. Stone asked a museum worker to use a scanning electron microscope—SEM—to take a look at the objects. The SEM can enlarge an object up to 400,000 times. Even the tiniest cracks show up.

Solving the Case

The SEM proved Stone's hunches. The seams, the sloppy solders, and the cut symbols showed up clear as a bell. The objects were fake!

Of course, the "ancient Egyptian" gold pieces are made of real gold. But they were made by modern forgers—not by ancient people. They were then "planted" in the tomb by people wanting to fool the public.

"This was done during World War One," explained Richard Stone. "What with everything that was going on, people weren't paying much attention to archeological sites. It probably wasn't very hard at all for crooks to steal onto the scene." And steal off with some real art treasures.

Museum officials don't know who the forgers were. The fakes were discovered years after the museum bought the pieces.

"Knowing how artists made their work is the most important step in figuring out whether an object is genuine," emphasized Stone.

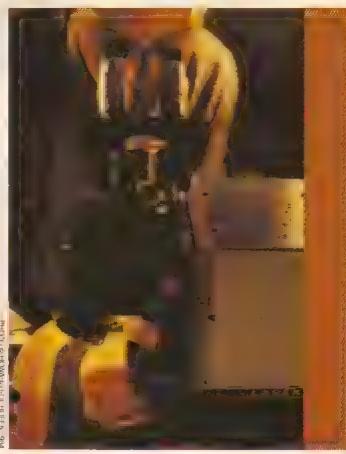
With the help of instruments such as electron microscopes, and by observing, testing, and checking out hunches, experts such as Richard Stone make the work of forgers harder. That's good news for art lovers, but bad news for forgers. And that's no April Fool!



Right: This painting was done by a famous artist named Van Gogh.

Below: X-rays can help prove whether a painting is forged. An X-ray of the Van Gogh painting shows that he once used the same canvas for another drawing.





Above: Microscopes can give clues to when a picture was drawn. This painting was done hundreds of years later than people thought.



The Case of the Stolen Statue

by Michael J. Dayton

The first day of April was one of those perfect days. The morning sun was shining like a new penny. Billowy clouds drifted lazily across the sky. After a long, cold winter, spring was finally in the air.

The Bloodhound Gang was at a flea market at the city fairgrounds. At one booth, small objects were on sale. Vikki and Skip kept walking, but Ricardo stopped. Two bookends had caught his eye. The bookends were in the shape of matching horses. They gleamed like gold in the bright sunlight. Ricardo picked them up.

Alarmed, the man sitting at the booth quickly grabbed the two bookends from Ricardo. His

name tag said Roger Norton.

"How much do you want for these bookends?" asked Ricardo.

"You can have only one bookend," answered Mr. Norton. "I've promised the other one to someone else. He will be picking it up this afternoon."

"What would I do with one bookend?" Ricardo wondered.

"It would make a great doorstop," insisted Mr. Norton. "Besides, you can't pass up this deal. It's better than gold. Belonged to my grandmother, you know. It's priceless. But you can have it for \$9.95."

Ricardo handed over the money. Mr. Norton gave him a bookend. Then the bargain hunter walked away from the booth, admiring his purchase. He caught up with Skip and Vikki who were looking through some old magazines.

"Look at this bookend I bought. It was a real

bargain."

"You bought one bookend?" Vikki asked.
"Isn't that like buying one shoe?"

"It's perfect if you're a light reader," said Skip.

At that moment, a man and a woman grabbed the bookend from Ricardo. The woman flashed a police badge.

"You three are under arrest," she said.

"Under arrest!" Skip exclaimed. "What are the charges?"

"Possession of stolen property."

The Gang Goes to Jail

Outside, the sun was still beaming. But it was a dark day for the Bloodhound Gang. They were used to catching criminals. For the first time, the tables of justice were turned against them. For the first time, it was they who were behind bars.

The Gang sat in a dark, dusty room at the police station. With them were Lieutenant Keans and Sergeant Trowbridge, the two officers who had arrested them.

"Whatever the problem is, I assure you we're innocent," sniffed Vikki. "We're the Bloodhound Gang, after all."

"Just as I suspected," said Sergeant Trowbridge. "It's a gang job."

"How can you charge me with stealing?" Ricardo asked. "I paid ten dollars for this."

"Ten dollars," laughed Lieutenant Keans.
"That's a good one. This statue is solid gold. It's worth a fortune. It was stolen last week from an art gallery."

"That's right," added Sergeant Trowbridge. "We learned that your buddy, Mr. Norton, planned to unload it at the flea market. So we staked out his booth. Pretty soon, you folks came by and picked this statue up. Now you have stolen property and you're under arrest. We know a crook when we see one!"

"This must be somebody's bad idea of an April Fool's joke," Vikki said. "Did Mr. Bloodhound put you up to this?" Sergeant Trowbridge raised his eyebrows.

"Mr. Bloodhound? Is he a member of your gang,
too?"

"That about settles it," Lieutenant Keans said wearily. "Let's throw these three in the slammer. Then we'll go and get Norton and this Mr. Bloodhound. We'll have the whole gang. Sergeant, take them away."

Suddenly, an idea came to Skip.

"Something is wrong here," he said thoughtfully. "You two keep talking about just one statue. Ricardo looked at bookends—a matched set of bookends!"

"Skip, you're a genius," Ricardo said. "This statue here must be a copy of the real thing! But how can we prove it?"

At this point, a woman who had been standing near the Gang walked over to them. She was carrying a dog.

"Excuse me," she said. "I'm Samantha Messer. I couldn't help overhearing your problem.

Maybe I can help. I'm here to pick up my beagle
Harry. He ran away and someone turned him in.
But that's not why I can help you. I'm a science
teacher. I think there's a way to get you out of
this jam."

"We need all the help we can get," muttered Vikki. "But how can you help?"

A Motter of Gravity

"If this statue is fake, I can prove it," Samantha said. "All I need to do is check the specific gravity of this statue."

'Specific what?" Lieutenant Keans asked.

"Specific gravity," Samantha replied. "If you'll bring me a balance scale, some string, and two bowls—one filled to the brim with water, I'll show you."

The two officers looked confused. Then Lieutenant Keans sent the sergeant after the materials Samantha needed. He returned shortly.

As everybody looked on, Samantha weighed the statue and the two bowls. Next, she tied the string around the statue. She put the empty bowl under the one filled with water, then lowered the statue into the full bowl. Water spilled into the empty bowl.

"What does this test have to do with gravity?" Skip asked.

"Nothing really, it's just a fancy name. If I >>>

27

divide the weight of the statue by the weight of the spilled water, I get what's called 'specific gravity'.

"For example, say you had a piece of aluminum and a piece of gold the same size. Even though the two bars look identical, the gold would weigh more than the aluminum. The gold is denser. Fifty pounds of gold would fit in my hand. But I'd need a big bucket to hold 50 pounds of aluminum.

"If we put those two metals in water, which would spill more water?"

"The aluminum," answered Vikki. "It would take up more space."

"Right!" replied Samantha.

"Now I know that the specific gravity of gold is about 19. But after weighing both the statue and the spilled water, and then dividing, I get a specific gravity of 11. So it's not pure gold."

"You mean this statue is a fake?" whistled Vikki.

"I'm afraid so," replied Samantha. "You were taken."

"I apologize," Lieutenant Keans said to the Bloodhound Gang, "It looks like you were telling me the truth all along."

"Mr. Norton made April fools out of all of us," Vikki said. "He must have known you were on to him. So he made a copy, hoping it would throw you off the track."

"But it may not be too late," Ricardo said.

"Norton told me his buyer wasn't coming until this afternoon. If he still has the real one with him, we may be able to pull off an April Fool's stunt of our own. Here's my plan...."

The Trop & Set

The Gang arrived back at the fairgrounds within minutes. The police trailed close behind. They hid near Mr. Norton's booth.

In a few minutes, a man approached Mr. Norton. He picked up the statue and talked quietly to him.

"That must be the buyer," Ricardo whispered. "Come on, let's go get them." Clutching the statue, he approached the booth.

"Sorry folks, no refunds or returns on sale items," Mr. Norton said when he saw Ricardo.

"Refund? We came back to thank you," Ricardo replied.

"A friend of ours is a jeweler," Vikki continued. "We showed him the bookend. He told us it's pure gold!"

"What?" shouted Mr. Norton. He stared at the statue Ricardo was holding.

"Say, what are you trying to pull on me?" the buyer asked angrily. "You told me this was the real statue," he said, pointing to the one he held.

"It's just a minor mix-up," Mr. Norton assured him. He turned to Ricardo. "Look, I got a call from Grandma this morning," he said. "She decided she really wants to keep these old bookends. Sentimental value, you know. You nice kids wouldn't want Grandma to get upset now, would you?"

"Sorry, you just told us no refunds," Ricardo said.

"Give me that statue!" Norton yelled, lunging at Ricardo.

"It's mine!" shouted the other man.

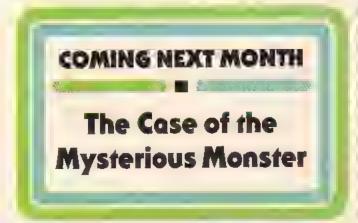
Both Mr. Norton and the buyer grabbed the statue from Ricardo and the two wrestled to the ground.

Vikki picked up the real statue as the police rushed to them. They pulled the two men apart and quickly handcuffed them. The fake statue lay on the ground covered with dirt.

"Fighting like children over a two penny bookend," said Sergeant Trowbridge, clucking his tongue. "This won't look good on the police report."

Mr. Norton scowled at the Bloodhound Gang. "You three made a fool of me," he snarled.

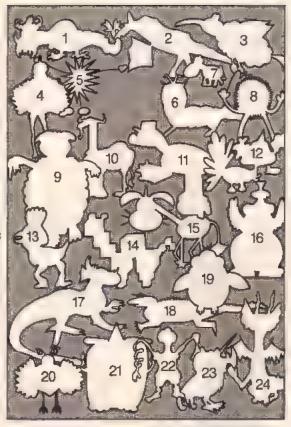
"That's right, and we forgot to say 'April Fool,' "Ricardo laughed, as the officers led the two men away.



Creature Feature Just follow the numbers to check out the winning creatures in our poster.

- 1. Supermonster...wears a red supermonster T-shirt. Kevin Williams, Pine City, NY
- 2. The Elephant-eater...16 stories high with a long mouth and sharp teeth.

 Daniel Heister, McVeytown, PA
- 5. The Multi-Colored Lupine can fly as high as a jet.
 Debbie Faklis, Clearwater, FL
- 4. The Illustrated Animal eats leaves off "Kanuka" trees and sleeps in the "Crystal Cavern." David Mahoney, Glen Mills, PA
- 5. Fuzz Balls are small, fuzzy creatures that live on Mars.
 Jessica Wecker, Sudbury, MA
- 6. The Winged Owkock comes from Japan. He lives in a nest, and flies and hops around. Greg Damron and Brian Fockler, Summersville. WV
- 7. The Hipp-a-roo-dle weighs 1,672 pounds, sleeps in trees, and is a real veggie lover! Beth McCusker, Aurora, IL
- **6.** Once there was a family of **Grappies** who fed on sweet pickles and apples... Ginny Crosthwait, Olney, TX
- 9. The Hippophant-Turtledog
 This Louisiana creature eats
 seaweed and sleeps along the
 bayou banks.
 Brenda Belton, Gray, LA
- 10. The Elegitics sleeps standing up!
 Scott Foxx, Savannah, GA



11. Heroferd is only 2 inches tall (that's why he's wearing high heels) and cleans fish bowls with a toothbrush.

Rachel Bresnay, Detroit, MI

12. Caraj speaks English and is very friendly. **Carrie Kildow.** Aurora. CO

13. The Tri-Leg Tree Hopper... lives in the jungle, eats insects, and sleeps in the tops of trees. David Bolgiano, Odessa, TX

14. The Rubik Cubeub eats
Rubik cubes left behind by hunters
and lives in a square nest made of
mud and rocks.
Serri Miller, Bemidji, MN

15. The Waphleckus lives in a strange faraway land and eats

fried banana slices with garlic salt, boiled turnips with honey, and chilled okra juice. Julie Childers, Sandsprings, OK

16. The Gazooka lives in the strange land of Astarlind. He's a hunter, good at camouflage, and very friendly.

Lee Ann Tzeng, Monroeville, PA

- 17. Zebrie is a tiger dragon and sleeps in caves made of gold.

 Matthew A. Gorman, Seattle, WA
- **18. The Tatoringo** lives on the bottom of the Pacific. It eats sharks and sea snakes: **Kurt Hasenbalg** (city unknown)
- 19. Pinggwowle just loves peanut butter!
 Allison Messina, Wallingford, CT
- 20. The Police Dorred Drib lives in Australia and seldom, if ever, flies. Sarah Smith, Vincennes, IN
- 21. Parcieopenous eats toxic waste and loves raw sewage.
 Jeff Brustom, San Jose, CA
- 22. Toor Reeb was created in a failed attempt to clone a bottle of root beer.

 Artist unknown

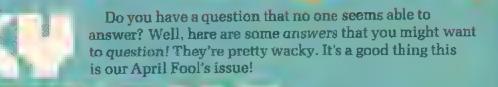
23. The Rhinocancorn is beautiful when soaring through the sky.
Michele Carter, Dixon, CA

24. The Moon Monkey is from outer space and eats mushrooms and peanut butter instead of boiled moondust.

Katherine Grimwood, Quebec,

Canada

29



by Megan Stine and H. William Stine

Why do dogs lick every-

thing? Your dog's wet slurpy tongue all over your face isn't just doggy devotion. It's his way of talking to you! Dr. Kay Nine discovered that barking has nothing at all to do with trying to speak. The truth is that dogs talk with their tongues. Yes, these cagey creatures are born with an instinct for Morse Code. So every time they lick your face or your hand, they're not just getting you all gooey. They're sending you a coded message that could help you on a quiz or even save your life.

Question sent in by Carrie Yerbooks, Baton Twirler, LA.



Where did the first headache

come from? When people say, "You give me a headache"—it's absolutely true! Surprising as it may sound, Dr. Tru Lee Phony says headaches are spread from one person to another, just like many other diseases.

The first headache is believed to have started when the apple fell on Isaac Newton's head. Not only did Newton get to the um—"core" of gravity, but he got a pain in the head as well. Soon headaches had spread throughout the world.

Last year Dr. Phony discovered that some people are headache carriers. This means they don't actually have a headache themselves. But they can give one to someone else—fast.

For instance, have you ever broken the toaster, played a Prince record over and over again—loud—and tried break dancing on a just-washed kitchen floor? When your mother screamed "You're giving me a headache!" you probably thought she was mad at you. Well, relax, she wasn't. She only got a headache because you are a carrier.

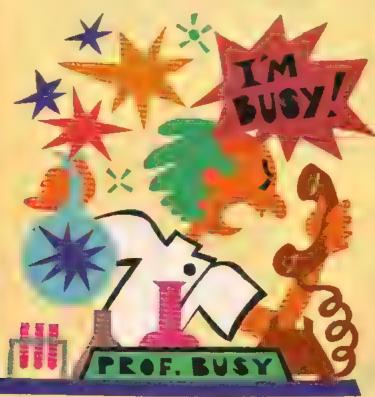
Question sent in by N. Lotte Payne, Sinus Heights, AZ.

How long is an hour? Believe it or not, the number of minutes in an hour can change, says Professor Ty M. Lee. It all depends on who's timing it and what the hour is being used for!

For example, when you watch a one-hour program on TV, it only lasts 48 minutes. The rest of the time is filled with commercials. On the other hand, a one-hour football game on TV has four 15-minute quarters but lasts 3½ hours.

At home, an hour almost always lasts more than 60 minutes. For instance, everybody knows that when your parents say it's a one hour drive to Aunt Phyllis's and Uncle Will's house—it's really going to take 90 minutes at least. Or when you babysit for the neighbors from 8:00 to 11:15, they'll only pay you for three hours. You figure it out—that's a 65-minute hour on anybody's clock!

Question sent in by "Big Ben" Tower, London, England.



Who invented the busy

signal? Good question! We've been trying to call the phone company all day to get the answer. But the line was always busy. So instead we asked Brenda Starryeyes, a famous astrologer, for her opinion. Guess what she said? She said that with Gemini as your sun sign, homework as your rising sign and neon as your flashing sign, this would be a good day to spend cleaning your room. That should keep you busy. And if it doesn't, we'll have your phone disconnected! Question slipped under our door by a reader who wouldn't dore reveal his name.

Now it's your turn to get even with us. Make up a wacky answer to this question: Why are more chickens left handed than right-handed? We'll print some answers in a future issue. Send your answer with your name and address, to:

Wacky Answers 3-2-1 Contact P.O. Box 599 Ridgefield, NJ 07657

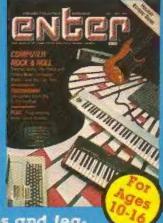




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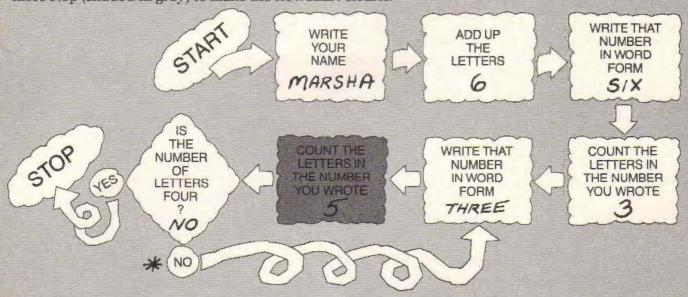
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< DidIt!

Aftention! Many of you with six letters in your name had problems with the "Just 4 You" flowchart in the December/January Extra! Look below for the solution. We should have added one more step (shaded in gray) to make the flowchart clearer.



*Since the answer is No, follow the arrow back to the beginning of the loop to "write that number in word form." "5" is spelled five and that has four letters in it. And so the flowchart works.

Non-Cents (page 2)

The real penny is shaded gray.



Monsters, Go Home! (page 32)

Gigantor lives in Hackensack Expando lives in Google Hairy Harry lives in East River

Next Month!

Here's a sample of what you'll find in the next issue of 3-2-1 CONTACT:

The Mutants Are Coming!

Find out about the newest breed of comic book superheroes.

Forest Adventure

Come along as CONTACT follows some kids in a race to find their way through the woods.

Plus Factoids, Puzzles, Letters and More!



Going to the Dogs

Sometimes, objects in nature play tricks on our imaginations. For instance, this leaf looks more like a cartoon dog than something that grows on trees. Of course, the doggy leaf didn't just grow that way. A caterpillar ate part of a whole leaf, and an animal was born.

Now that spring is just about here, why not look for odd shapes and "funny faces" in nature? Try your backyard or neighborhood park. As one famous scientist said, "I spent the summer traveling. I got halfway across my backyard."

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